

REMARKS

Claims 12-28 are pending in the present application. Applicant has cancelled claims 27 and 28. Applicant has amended claims 12 and 22 to provide a clearer characterization of the product resulting from the disclosed synthesis. The process by which the product is obtained is disclosed in paragraph [0039]; claim 12 has been amended to recite the product in terms of this process. Claims 12 and 22 have been amended to limit the amount of graphitizable carbon used in the process to 15%. Support for this limitation can be found in paragraph [0038]. No new matter has been added to the amended claims. Reconsideration of the claims is respectfully requested.

CLAIM REJECTIONS

35 U.S.C. 112 rejection

The Examiner has rejected claims 12-28 under 35 U.S.C. 112, first paragraph, for failure to comply with the written description requirement. The Examiner asserts that the term “graphitizable” refers to a precursor. In response, Applicant has amended the claims to recite a filter containing the material resulting from firing graphitizable carbon in a non-oxidizing and/or reducing atmosphere at a temperature up to 1000°C. This process is recited in paragraph [0039] of the specification, and this characterization of the product in terms of its synthetic process avoids confusion engendered by the terminology previously used to describe the product. For these reasons, the rejection of claims 12-28 under 35 U.S.C. 112, first paragraph, is believed to have been overcome.

35 U.S.C. 103(a) rejection over Daussan in View of Morris and Jones

The Examiner has rejected claims 12-21 under 35 U.S.C. 103(a) for obviousness over U.S. Patent No. 5,690,161 to Daussan (“Daussan”) in view of U.S. Patent No. 5,785,851 to Morris et al. (“Morris”) and U.S. Patent No. 5,520,823 to Jones et al. (“Jones”). The Examiner cites Daussan as teaching a filter device comprising a protruding frame joining a plurality of sieve plates, the protruding frame and sieve plates defining a reservoir chamber. The Examiner cites Morris as teaching a filter device with a plate including a corrugated surface. The Examiner also cites Jones as teaching a filter comprising a bonded network of graphitized carbon and a ceramic raw material. However, the filter of the present invention is distinguishable from the filters of Jones in terms of both properties and synthetic method. The slurry used by Jones to produce filters contains graphite, rather than graphitizable carbon, as a starting material, and the

process used by Jones will not produce, and does not suggest, the product of the present invention. Jones does not teach the use of a non-oxidizing and/or reducing atmosphere during the firing process. Instead, the Jones process is carried out under conditions in which graphite is prone to oxidation. Jones does not suggest the use of a non-oxidizing and or reducing atmosphere, but instead teaches the addition of a minor portion of silicon (Jones, col. 3, lines 20-27) to ameliorate the effects of an oxidizing atmosphere. For these reasons, the rejection of claims 12-21 under 35 U.S.C. 103 (a) is believed to have been overcome.

35 U.S.C. 103(a) rejection over Rogers in view of Daussan and Morris


The Examiner has rejected claims 22-28 under 35 U.S.C. 103(a) for obviousness over PCT Document NO. WO 01/40414 A1 to Rogers (“Rogers”) in view of U.S. Patent No. 5,690,161 to Daussan et al. (“Daussan”) and U.S. Patent No. 5,785,851 to Morris et al. (“Morris”). The Examiner cites Rogers as teaching a method for producing a filter device by pressing a semi-damp mixture comprising ceramic powder and a graphitizable bonding precursor and fibers to obtain a sieve plate having a disk shape, and firing the assembly in a non-oxidizing atmosphere to a temperature up to 1000°C. The Examiner cites Daussan as teaching a filter device comprising a protruding frame joining a plurality of sieve plates, the protruding frame and sieve plates defining a reservoir chamber. The Examiner also cites Morris as teaching a filter device with a plate including a corrugated surface. However, Rogers provides no teaching or suggestion of the amount of graphitizable carbon used in the filter of the present invention. The examples (p. 14, line 10 ff., p. 16, lines 18 ff.) provided by Rogers contain graphitizable material exclusively. The description, in claim 1 of Rogers, of the product as “produced from particulate coal” suggests that the product consists essentially of coal-based materials rather than that the product is comprised of such materials, and thus teaches a product produced from a high percentage of, or entirely from, coal-based materials. Claim 1 of Rogers refers to a largely anisotropic product; such a product would be free of isotropic effects that could be introduced by, for example, significant quantities of fibrous additives. There is no teaching or suggestion by Rogers of a filter device that contains, as does the filter of the present invention, only up to 15% by weight of the graphitizable carbon component. For these reasons, the rejection of claims 22-28 under 35 U.S.C. 103 (a) is believed to have been overcome.

Applicant respectfully submits that claims 12-26 are patentable over the prior art. Early and favorable action is earnestly solicited.

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Vesuvius
250 Park West Drive
Pittsburgh, PA 15275
(412) 429-1800 x6921, (412) 429-3448 fax.

Respectfully submitted,

A handwritten signature in cursive script that reads "Thomas J. Clinton".

Thomas J. Clinton
Reg. No. 40,561
thomas.clinton@us.vesuvius.com